

In the claims:

For the Examiner's convenience, all pending claims are presented below with changes shown in. Please cancel claims 3 and 12-14.

1 1. (Currently Amended) A processing element comprising:
2 an instruction buffer;
3 a first most often (MO) buffer coupled to the instruction buffer; and
4 an execution unit coupled to the instruction buffer ~~and the first MO buffer,~~
5 ~~wherein the execution unit is adaptable to execute instructions stored within the first MO~~
6 ~~buffer based upon a first predetermined profile; and~~
7 a decode module, coupled to the instruction buffer, the first MO buffer, and the
8 execution unit, to decode an instruction to determine whether the instruction is to be
9 stored in the first MO buffer.

1 2. (Currently Amended) The processing element of claim 1 further comprising a
2 second MO buffer coupled to the instruction buffer and the decode module, ~~execution~~
3 ~~unit,~~ wherein the execution unit ~~is adaptable to~~ executes instructions stored within the
4 second MO buffer based upon a second predetermined profile.

1 3. (Cancelled)

1 4. (Currently Amended) The processing element of claim 2 ~~3~~ wherein the decode
2 module decodes an instruction to determine ~~determines~~ whether ~~an~~ the instruction is to be
3 stored in the first MO buffer or the second MO buffer ~~upon decoding the instruction.~~

1 5. (Currently Amended) The processing element of claim 4 further comprising:
2 a first profile buffer coupled to the first MO buffer, ~~wherein the first profile buffer~~
3 ~~stores to store~~ the first predetermined profile; and
4 a second profile buffer coupled to the second MO buffer, ~~wherein the first profile~~

5 ~~buffer stores to store~~ the second predetermined profile.

1 6. (Original) The processing element of claim 5 wherein the first and second
2 predetermined profiles each include a plurality of profile bits, each profile bit indicating
3 whether a corresponding instruction is to be executed at the execution unit during a
4 particular instruction fetch cycle.

1 7. (Original) The processing element of claim 6 further comprising:
2 a first profile pointer coupled to the first profile buffer; and
3 a second profile pointer coupled to the second profile buffer.

1 8. (Original) The processing element of claim 7 wherein the first profile pointer
2 points to a first profile bit of the first predetermined profile during a first instruction fetch
3 cycle.

1 9. (Original) The processing element of claim 8 wherein an instruction stored in
2 the first MO buffer is executed at the execution unit during the first instruction fetch
3 cycle if the first profile bit is active.

1 10. (Original) The processing element of claim 8 wherein an instruction stored in
2 the instruction buffer is executed at the execution unit during the first instruction fetch
3 cycle if the first profile bit is inactive.

1 11. (Currently Amended) A digital signal processor (DSP) comprising:
2 a plurality of processing elements, wherein each of the processing elements
3 comprises:
4 an instruction buffer;
5 a first most often (MO) buffer coupled to the instruction buffer; and
6 a second most often (MO) buffer coupled to the instruction buffer;
7 an execution unit coupled to the instruction buffer ~~and the first MO buffer.~~

~~wherein the execution unit is adaptable to execute instructions stored within the~~
~~first MO buffer based upon a first predetermined profile and to execute~~
~~instructions stored within the second MO buffer based upon a second~~
~~predetermined profile; and~~
~~a decode module, coupled to the instruction buffer, the first MO buffer,~~
~~the second MO buffer and the execution unit, to decode an instruction to~~
~~determine whether the instruction is to be stored in the first MO buffer or the~~
~~second MO buffer.~~

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Currently Amended) The DSP of claim ~~11~~ 14 wherein each processing element further comprises:
a first profile buffer coupled to the first MO buffer, ~~wherein the first profile buffer~~
~~stores to store~~ the first predetermined profile; and
a second profile buffer coupled to the second MO buffer, ~~wherein the first profile~~
~~buffer stores to store~~ the second predetermined profile.

16. (Currently Amended) The DSP of claim ~~12~~ 5 wherein the first and second predetermined profiles each include a plurality of profile bits, each profile bit indicating whether a corresponding instruction is to be executed at the execution unit during a particular instruction fetch cycle.

17. (Original) The DSP of claim 16 wherein each processing element further comprises:
a first profile pointer coupled to the first profile buffer; and

4 a second profile pointer coupled to the second profile buffer.

1 18. (Original) The DSP of claim 17 wherein the first profile pointer points to a
2 first profile bit of the first predetermined profile during a first instruction fetch cycle.

1 19. (Currently Amended) A method comprising:
2 receiving a first instruction at an instruction buffer;
3 examining a bit within ~~determining whether~~ the first instruction ~~has been~~
4 designated to determine whether the first instruction is to be retrieved from a first buffer
5 ~~in order to be executed~~; and
6 ~~if so~~, retrieving the first instruction from the first buffer if the bit indicates that the
7 first instruction is to be retrieved from the first buffer;
8 otherwise, retrieving the buffer from a second buffer.

1 20. (Original) The method of claim 19 further comprising executing the first
2 instruction after it has been retrieved from the first buffer.

1 21. (Currently Amended) The method of claim 19 further comprising:
2 examining the bit within ~~determining whether~~ the first instruction ~~has been~~
3 designated to determine if the first instruction is to be stored in the first buffer if the first
4 instruction has not been designated to be retrieved from the first buffer ~~in order to be~~
5 ~~executed~~;
6 ~~if so~~, storing the first instruction in the first buffer; and
7 executing the first instruction from the instruction buffer ~~after it has been~~
8 ~~retrieved from the second buffer~~.

1 22. (Currently Amended) The method of claim 21 further comprising:
2 determining whether the first instruction includes a command to load a profile if
3 the first instruction has not been designated to be stored in the first buffer;

4 if so, loading the profile in a third buffer if the first instruction has not been
5 designated to be stored in the first buffer; and
6 executing the first instruction after it has been retrieved from the first buffer.

1 23. (Original) The method of claim 22 further comprising executing the first
2 instruction after it has been retrieved from the second buffer if it is determined that the
3 first instruction does not include a command to a load a profile if the first instruction has
4 not been designated to be stored in the first buffer.

1 24. (Currently Amended) An article of manufacture including one or more computer
2 readable media that embody a program of instructions, wherein the program of
3 instructions, when executed by a processing unit, causes the processing unit to:

4 receive a first instruction at an instruction buffer;

5 examine a bit within ~~determine whether~~ the first instruction ~~has been designated~~
6 to determine whether the first instruction is to be retrieved from a first buffer ~~in order to~~
7 ~~be executed~~; and

8 if so, retrieve the first instruction from the first buffer if the bit indicates that the
9 first instruction is to be retrieved from the first buffer;

10 otherwise, retrieve the buffer from a second buffer.

1 25. (Original) The method of claim 24 wherein the program of instructions, when
2 executed by a processing unit, further causes the processing unit to execute the first
3 instruction after it has been retrieved from the first buffer.

1 26. (Currently Amended) The method of claim 24 wherein the program of
2 instructions, when executed by a processing unit, further causes the processing unit to:

3 examine the bit within ~~determine whether~~ the first instruction ~~has been designated~~
4 to determine if the first instruction is to be stored in the first buffer if the first instruction
5 has not been designated to be retrieved from the first buffer ~~in order to be executed~~;

6 if so, store the first instruction in the first buffer; and
7 execute the first instruction from the instruction buffer ~~after it has been retrieved~~
8 ~~from the second buffer.~~

1 27. (Currently Amended) The method of claim 26 wherein the program of
2 instructions, when executed by a processing unit, further causes the processing unit to:
3 determine whether the first instruction includes a command to a load a profile if
4 the first instruction has not been designated to be stored in the first buffer;
5 ~~if so,~~ load the profile in a third buffer if the first instruction has not been
6 designated to be stored in the first buffer; and
7 execute the first instruction after it has been retrieved from the first buffer.

1 28. (Original) The method of claim 27 wherein the program of instructions, when
2 executed by a processing unit, further causes the processing unit to execute the first
3 instruction after it has been retrieved from the second buffer if it is determined that the
4 first instruction does not include a command to a load a profile if the first instruction has
5 not been designated to be stored in the first buffer.